

IN THE SENATE OF THE UNITED STATES.

APRIL 7, 1858.—Ordered to be printed.

Mr. MALLORY made the following

REPORT.

[To accompany Bill S. 165.]

The Committee on Naval Affairs, to whom was referred "a bill authorizing the construction of a dry dock for the naval service," have had the same under consideration, and thereupon report :

The peace policy of our country with reference to its navy—the wisdom of which policy is manifest—has been to maintain in commission the smallest number of ships which our commercial or treaty relations would justify ; to exhibit in this naval nucleus the nearest possible approach to the perfection of war vessels which the progress of the age would admit of, and to accumulate material and prepare the means to increase their number to meet any emergency with the least possible delay. The casting of cannon, the manufacture of gun carriages, of balls, shells, and small arms, the collection and preservation of ship timber, and the establishment of workshops, of docks, and of yards for construction and repair, are the direct results of this policy, founded on the maxim "*in time of peace prepare for war.*"

While England's systematic intervention in the affairs of Europe, no less than her insular position and large colonial possessions, constrain her to maintain, at an enormous expense, a formidable navy to preserve her peaceful relations, the policy of non-intervention and peace, which we have uniformly pursued, relieves us from this calamitous necessity.

It is a wise rule of military art to anticipate and prepare for, in any emergency, the full power of your adversary ; and in all our naval policy and preparation, we have wisely looked to the naval power of England for the standard by which to measure our own strength. From the commencement of the last war to the present moment we have never lost sight of this rule ; and as its natural consequence, we have seen that, whether in peace or war, whenever our ships have met hers, sloop for sloop, or frigate for frigate, we have thus far had no reason to question the naval power of our country.

Should we at any time become involved in that great calamity of nations—a war—and have Britain for our adversary, the contest would

necessarily be upon the deep ; and the power of steam and the use of heavy shell guns would produce such fatal and brilliant single combats, ship against ship, as the ocean has never witnessed. The commencement of such a struggle might prove disastrous to our commerce and our seaboard ; but with our unlimited means of creating a navy, no apprehensions as to the final result could be indulged.

England has a *built navy* ; we have a navy *to build* ; and all that she has ever accomplished, with her own unsurpassed energy and skill, would guide us in the struggle for superiority.

When we declared war in 1812 the American cabinet seriously contemplated dismantling and mooring our ships-of-war in port, from the belief that they would but go to sea to be captured ; and our escape from this inglorious step was due more to the active interference of three of our naval officers than to any other cause.

England's navy is far more formidable now than it was then, while ours is not only relatively, but positively less so. Her naval estimates for the coming fiscal year call for 59,780 seamen and marines, and an expenditure of \$50,644,075.

We are to have a steam navy ; and in constructing it we must be controlled to a certain extent by the depth of water at the entrance of our ship harbors, which depth varies, between Maine and Texas, from fourteen to fifty feet ; but to whatever class the ship to be built may belong, she should combine the heaviest battery and the greatest speed attainable by that class.

The union of speed and power is hereafter to determine naval contests ; the greatest known battery afloat, combined with the greatest known speed, must constitute the perfection of a war ship ; and with our unsurpassed resources and national and individual energy, warned by the failures and guided by the successes of other nations, it would be unreasonable to doubt our ability to approximate this perfection at least as nearly as any other people.

The establishment of docks at appropriate points for the examination and repair of ships is essential to a naval power. Before such docks came into use, a slight repair, even to a heavy ship's bottom, was a serious matter, involving immense labor, great consumption of time, and some risk to hull and spars. A frigate was necessarily relieved of her guns, and almost everything but her lower masts, and was then slowly and cautiously heaved keel out, or hauled up on the land ; whereas now the frigate goes into dock all "atanto"—"manned, provided, and furnished" for her voyage, and is examined, repaired, and launched again in a few hours.

The only naval station or navy yard south of Norfolk is at Pensacola ; and, though it was commenced in 1825, is admirably situated with reference to naval operations in, and the defence of, the Gulf of Mexico, the government has as yet failed to place it in the condition which the interests of the country demand.

With a climate of remarkable salubrity, inviting labor at all seasons, and with the best ship timber of the world growing around it, no attempt to build a naval ship there has ever been made until this year, when the present Secretary of the Navy, fully appreciating its importance, has required one of the sloops last provided for to be con-

structed there. But the yard is without the means of constructing engines or boilers; and as we shall rarely hereafter build any but steamships for our navy, we should at once provide at this and at each of our other navy yards the means of building the best and largest marine engines.

In 1847, with a want of judgment which reflects but little credit upon those public functionaries who are responsible for its adoption, and, as it has been frequently alleged in congressional debate, under a persistent lobby pressure, Congress was induced to appropriate money to construct a wooden scow dock at this yard; and the following report, made in 1856 by a board of skilful officers selected for the purpose of examining it, shows it to be worse than useless:

NAVY DEPARTMENT, *December 27, 1856.*

SIR: In reply to the resolution of the Senate of August 27, 1856, that the Secretary of the Navy cause a thorough examination "to be made by a board of military and civil engineers of the condition and probable duration of the wooden dock at the Pensacola navy yard, together with the annual expense of maintaining it in working condition, and also the cost of constructing at said yard, upon the most approved plan, a permanent stone dock, for docking the largest naval vessels which the depth of water on the Pensacola bar admits," I have the honor to transmit herewith a copy of the report of the examination made by a board of military and civil engineers, in compliance with the resolution.

I am, sir, very respectfully, your obedient servant,

J. C. DOBBIN.

Hon. J. D. BRIGHT,

President of the United States Senate.

NAVY YARD, PENSACOLA HARBOR,

December 8, 1856.

SIR: The undersigned, by letter of the 7th ultimo from the Secretary of the Navy, constituting a board for the objects designated in the following resolution of the Senate of the United States, passed 27th August, 1856: "*Resolved, That the Secretary of the Navy cause a thorough examination to be made, by a board of military and civil engineers, of the condition and probable duration of the wooden dock at the Pensacola navy yard, together with the annual expense of maintaining it in working condition, and also the cost of constructing at said yard, upon the most approved plan, a permanent stone dock, for docking the largest naval vessels which the depth of water on the Pensacola bar admits,*" convened at the navy yard on the 25th November, and, having performed the duties assigned them, respectfully report:

The board (owing to the illness and subsequent decease of James Herron, civil engineer, one of its members) was deprived, during its whole session, of his valuable and efficient co-operation, and the sur-

viving members of the board wish to place here on record the testimony of their respect to the memory of the deceased, and their sense of the loss to the public service occasioned by this melancholy event.

Condition and probable duration of the wooden dock.

Under this head the board made the necessary examination of the outside and inside of the dock, by boring into the timbers and plank-ing in those places where the rot might be expected soonest to be developed.

The results of the examination show that the rot has decidedly manifested itself in the large timbers constituting the framing of the side walls, and in the upright timbers of the gates of the dock; and the board, considering the progress of decay since the construction of the dock, and the causes which will facilitate the further deterioration of this structure, are of the opinion that, after the lapse of five (5) years, it will be hazardous to dock a ship, unless the sides of the dock and its gates shall have been first reconstructed.

The causes which have been (and will continue to be) active in the destruction of this dock are these:

1. The partial filling only of the side walls with water, and the high temperature which exists in those recesses.

2. The exposure of the ends of the upright timbers of the gates, without covering, to the influence of the sun and rain.

3. The partial filling only of the main chamber of the dock with water, and the exposure of this part to the weather.

Under the item, therefore, of deterioration of dock, the board is of opinion that the annual expenditure will be from \$40,000 to \$50,000 during the next five (5) years.

Annual expense of maintaining the dock in a working condition.

Under this head are enumerated only those current and usual repairs incident to an otherwise sound condition of the dock.

The floating-gate of the basin is much eaten with the worms, and will require reconstruction, at a cost of \$13,000. This sum, being divided by the number of years representing the probable duration of the dock, will give, as the annual amount of repairs, \$2,600.

Annual repairs of floating-gate.....	\$2,600
“ painting.....	8,000
“ caulking.....	1,300
“ repairs of wood work (casual).....	250
“ “ engines and pumps.....	500
“ “ blocks, falls, and gates.....	1,000
“ cleaning and attendance.....	1,659
Total annual repairs and expenses.....	<u>8,100</u>

Cost of constructing, at Pensacola navy yard, upon the most approved plan, a permanent stone dock, for docking the largest naval vessels which the depth of water on the Pensacola bar admits.

The board, having decided on a suitable site for the location of a stone dry dock, (sketch A,) examined with great care the records of borings, made in former years in this vicinity, and likewise executed a boring at one point of the proposed site.

The information thus obtained, as well as the experience derived from the successful construction of the permanent wharf, leave no doubt of the practicability of constructing a stone dry dock at a reasonable cost.

Estimated cost of stone dry dock.

Excavation	\$50,000
Coffer-dam and sheet piling.....	46,800
Foundation.....	136,608
Masonry	776,572
Culvert and well.....	55,000
Gates.....	150,000
Drainage	20,000
Engine house.....	40,000
Stone pier wharf.....	125,000
Engine and boilers.....	35,000
Tools and fixtures.....	60,000
Removing coffer-dam.....	10,000
Contingent.....	20,000
Total.....	<u>1,524,980</u>

In making this estimate, the board has adhered to existing prices of work and materials, and has endeavored to make such a liberal allowance, under the several items, as to give confidence that the work, under the supervision of a competent engineer, can be undertaken and completed for the sum estimated.

Recapitulation.

FLOATING DOCK.—General condition, serviceable; probable duration, five (5) years; annual deterioration, for succeeding five (5) years, \$40,000 to \$50,000.

Annual, casual, and current repairs during succeeding five (5) years, \$8,000.

STONE DRY DOCK.—Construction, practicable; estimated cost, \$1,524,980.

Respectfully submitted.

CALVIN BROWN,
Civil Engineer.
JOHN NEWTON,
Captain Corps of Engineers.

Hon. J. C. DOBBIN,
Secretary of the Navy, Washington.

The following letter from the Secretary of the Navy furnishes some useful information as to this dock:

NAVY DEPARTMENT,
April 1, 1858.

SIR: I have the honor to acknowledge the receipt of your letter of the 22d ult., desiring certain information in relation to the floating dock at the Pensacola navy yard, and asking the opinion of the department as to the expediency of constructing a stone dock at that yard.

Having referred your letter to the chief of the Bureau of Yards and Docks, I enclose, herewith, a copy of his reply, dated the 25th ult., which affords all the information desired, except the opinion of the department as to the expediency of constructing a stone dock at the Pensacola yard.

I am clearly of opinion that a floating dock is but a temporary expedient, and that, in view of its perishable nature, for a series of years, a stone dock would be the most economical.

As the board of engineers who examined the floating dock at Pensacola, in 1856, state that it would be hazardous to dock a ship in it, after a lapse of five years, without a reconstruction of very material parts, the advantage of a stone dock is very apparent.

I am, very respectfully, your obedient servant.

I. TOUCEY.

Hon. S. R. MALLORY,
Chairman Committee Naval Affairs, U. S. Senate.

BUREAU OF YARDS AND DOCKS,
March 25, 1858.

SIR: In reply to the interrogatories contained in the letter from the Hon. S. R. Mallory, chairman of the Committee on Naval Affairs of the Senate, dated the 22d instant, in reference to the floating dock, basin, and railway at Pensacola, which was referred by you to this bureau, I have to submit the following answers:

1. As to the present condition of the dock.

Answer. The dock is believed to be in serviceable condition, although signs of decay have manifested themselves in the framing of the side walls and upright timbers of the gates.

2. The total cost of the dock up to this time.

Answer. The total cost of the dock, basin, and railway, to the 31st of December last, was \$1,004,883 92.

3. The average annual cost of keeping the dock in efficient repair.

Answer. The cost of repairs, including the expense of mooring the dock, from the 1st of July, 1853, to the 31st of December, 1857, (4½ years), is \$68,908 42, making an average annual expenditure of \$15,312 98.

4. The probable duration of the dock.

Answer. The board of engineers who examined the dock report, under date of 8th of December, 1856, "that, after the lapse of five years (from that date) it will be hazardous to dock a ship unless the sides of the dock and its gates shall have first been constructed."

5. The cost of the basin constructed for the dock, and the railway and its appurtenances.

Answer. The original cost of the basin and railway was \$364,319; but an additional tier of coping has been put upon the basin, to raise it to the grade of the yard, at a cost of \$18,243 84, making the entire cost \$382,562 84, which amount is embraced in the sum stated in answer to the second question above.

6. The length and capacity of the dock.

Answer. The length of the dock is 350 feet, and it is capable of docking United States war steamers of the largest class.

7. As to its capability of docking the new steam frigates.

Answer. It is of capacity sufficient to dock the new steam frigates.

8. The probable cost of a permanent stone dock at Pensacola of sufficient capacity to dock said frigates.

Answer. The estimated cost, as submitted by the board of engineers, in December, 1856, before referred to, is \$1,524,980.

The foregoing embraces information on all the points of Mr. Mallory's letter referred to the bureau, excepting that asking the opinion of the department as to the expediency of constructing a stone dock at Pensacola. Mr. Mallory's letter is herewith returned.

I have the honor to be, very respectfully, your obedient servant,
JOS. SMITH.

Hon. I. TOUCEY,
Secretary of the Navy.

The following extracts, touching the importance of Pensacola as a naval station, are taken from the reports of Mr. Upshur, Secretary of the Navy, made to the Senate in response to resolutions :

NAVY DEPARTMENT,
January 31, 1842.

SIR: In compliance with the resolution of the Senate of the 22d of July, 1841, I have the honor to make the following report :

I deemed it proper to submit the subject to which the resolution refers to the Board of Naval Commissioners, for their opinion and suggestions, preparatory to any examination of it by myself. Their known ability and experience in all matters relating to the naval service give to their views more importance than can justly attach to mine. I now enclose their report, to which I respectfully refer you.

I am deeply impressed with the absolute necessity of an adequate naval force to protect our commerce in the Gulf of Mexico. The mouth of the Mississippi, so far as commerce is concerned, is not at the Balize ; it is in the narrow pass between Cuba and Florida. The

trade-winds and the gulf stream, setting in from the east to the west, forbid the passage of vessels on the south side of Cuba; they are under the necessity of following the course of that stream, and passing into the Atlantic through the Gulf of Florida. Hence the entire trade of the Mississippi and its tributary rivers, with the exception of the small portion of it which is carried on with the countries on the west and south of the Gulf of Mexico, is at the mercy of whatever power may happen to command the Gulf of Florida. Two steam frigates, actively employed, are sufficient for this purpose. It follows, of course, that the commerce of a country large enough and fertile enough to support a population half as great as that of Europe, may be destroyed by any maritime power, at a cost too small to be worthy of calculation.

The unsettled condition of the governments of the former Spanish provinces on the Gulf of Mexico requires that our trade in the interior of that gulf should be protected by a suitable naval force. Hitherto we have had no squadron cruising there, although this department has had frequent occasion to send single ships, in order to vindicate the rights and redress the actual wrongs of our citizens. There is but little probability that better systems of government, insuring a more strict respect for the rights of friendly nations, will be established in any short time. We may therefore properly consider the existing state of things, among other reasons, for establishing a permanent force, to be always ready to act in every part of that gulf.

NAVY DEPARTMENT, *March 7, 1842.*

SIR: In compliance with a resolution of the Senate of the 16th ultimo, I have the honor to enclose reports and tabular statements from the Fourth Auditor and the commissioners of the navy.

From the report of the commissioners of the navy, it will appear that the navy yard at Pensacola is not in a condition for any extensive works on ships-of-war. No general plan of the yard has yet been agreed on, which is probably the reason why no further progress has been made in the several parts of the establishment. Repairs to a small extent, and such as do not require the docking of the ship, may now be made at that yard, but no vessel can be built there; and even extensive repairs are difficult for want of the necessary docks and wharves, and of a naval constructor, for which last no appropriation has been made.

It is my intention to proceed as rapidly as the means at my disposal will allow in the completion of all the necessary works, so as to render the yard useful for all naval purposes. But little can be effected, however, with the small means heretofore placed under the control of the department, and applicable to that object.

Of the importance of this yard, I have already expressed my views in a report which I had the honor to make to the Senate on the 31st day of January last, in conformity with their resolution of the 22d of

July last. To this report I respectfully refer. To me it is perfectly evident that the navy yard at Pensacola ought to be immediately completed, upon the most enlarged and useful scale, and that every preparation should be made for the full and perfect protection of the commerce of the Gulf of Mexico. That commerce is of incalculable value, and its only course is through the Gulf of Florida—it may be interrupted and destroyed by an enemy with a single active cruiser. The naval force designed for the Gulf of Mexico should be stationary there. Its usefulness will be impaired, to a great extent, by subjecting it to the necessity of resorting to the Atlantic yards for supplies and repairs; hence, every requisite facility of that sort ought to be afforded in the gulf itself, by the establishment of suitable navy yards and depots. As the commerce of the Gulf of Mexico is much more valuable than that of any portion of our country of equal extent, a navy yard, by which the necessary means of protecting that commerce may be supplied, is proportionally more important than a navy yard at any other place.

The expediency of establishing a dock at this yard of sufficient magnitude to dock the largest ship which the depth of the Pensacola bar will admit is unquestionable, and Congress has acknowledged it by authorizing the construction of the scow dock.

The insufficiency and worthlessness of this structure are apparent, from the report of the examining engineers, who say that, "*after the lapse of five years, it will be hazardous to dock a ship, unless the sides of the dock and its gates shall have been first reconstructed.*"

This report was made in December, 1856, and as the dock was turned over to the United States in April, 1855, its rapid decay may be estimated. The very details of the structure must insure its rapid decay. The language of the report is—

Condition and probable duration of the wooden dock.

Under this head the board made the necessary examination of the outside and inside of the dock, by boring into the timbers and planking in those places where the rot might be expected soonest to be developed.

The results of the examination show that the rot has decidedly manifested itself in the large timbers constituting the framing of the side walls, and in the upright timbers of the gates of the dock; and the board, considering the progress of decay since the construction of the dock, and the causes which will facilitate the further deterioration of this structure, are of the opinion that, after the lapse of five (5) years, it will be hazardous to dock a ship, unless the sides of the dock and its gates shall have been first reconstructed.

The causes which have been (and will continue to be) active in the destruction of this dock are these:

1. The partial filling only of the side walls with water, and the high temperature which exists in those recesses.
2. The exposure of the ends of the upright timbers of the gates, without covering, to the influence of the sun and rain.

3. The partial filling only of the main chamber of the dock with water, and the exposure of this part to the weather.

Under the item, therefore, of deterioration of dock, the board is of opinion that the annual expenditure will be from \$40,000 to \$50,000 during the next five (5) years.

The construction of a stone dock must necessarily involve from five to seven years, as such works are usually conducted; and your committee think it should be commenced at once, and they report a bill accordingly.

The expediency of establishing a dock at this yard of sufficient magnitude to dock the largest ship which the depth of the Pensacola bar will admit is unquestionable, and Congress has acknowledged it by authorizing the construction of the new dock.

The insufficiency and worthlessness of this structure are apparent from the report of the examining engineers, who say that "after the lapse of five years it will be hazardous to dock a ship, unless the sides of the dock and its water shell have been reconstructed." This report was made in December, 1856, and as the dock was turned over to the United States in April, 1855, its rapid decay may be easily marked. The very details of the structure manifest its rapid decay. The language of the report is—

Condition and probable duration of the wooden dock.

Under this head the board made the necessary examination of the outside and inside of the dock, by boring into the timbers and plank- ing in those places where the rot might be expected to be developed.

The results of the examination show that the rot has doubtless manifested itself in the large timbers constituting the framework of the side walls, and in the upright timbers at the gates of the dock; and on the beam, considering the progress of decay since the construction of the dock, and the causes which will facilitate the further deterioration of this structure, one of the opinions that, after the lapse of five (5) years, it will be hazardous to dock a ship, unless the sides of the dock and its water shell have been first reconstructed.

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